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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/659,350  | 09/11/2003  | Jean J. Robillard    | MR3155-4            | 5546             |
| 4586  | 7590        | 08/11/2004           | EXAMINER            |                  |
| ROSENBERG, KLEIN & LEE<br>3458 ELLICOTT CENTER DRIVE-SUITE 101<br>ELLICOTT CITY, MD 21043 |             |                      | KOYAMA, KUMIKO C    |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2876                |                  |

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |   |   |
|------------------------------|--------------------------------------|---|---|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/659,350 | <b>Applicant(s)</b><br>ROBILLARD, JEAN J. |   |
|                              | <b>Examiner</b><br>Kumiko C. Koyama  | <b>Art Unit</b><br>2876                   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because it includes improper language, such as "is provided."

The examiner also respectfully requests the Applicant to delete the reference numbers.

For example, "document (10)" should be changed to --document--.

Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bohm et al (US 6,343,745).

Bohm teaches a security element for a security document such as a bank note, ID card or the like (col 1, lines 5-10). The security document includes a magnetic material added to the first layer applied and this layer then applied discontinuously, e.g. in the form of a bar code (col 2, lines 29-35). The first layer is a base layer. As shown in Fig. 13, the document 1, or the base layer, includes an upper surface and the bar code 27 is printed thereon (col 6, lines 21-25 and Fig. 13). Bohm further discloses that second layer is disposed all over the first layer and is

composed so as to produce optimum adhesion between document material and further marking layers applied, such as a hologram (col 2, lines 29-35). The second layer and the marking layers as a whole is considered as the hologram layer.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 4 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohm in view of Ross (US 4,458,979). The teachings of Bohm have been discussed above.

Bohm fails to teach that the hologram is formed to deflect light in selective directions and is formed as a high efficiency phase hologram.

Ross teaches that as a hologram can be readily manufactured with sinusoidally changing transmission or reflection characteristics, or refractive index, it is possible for light beams which are incident on the light deflecting device at a specified angle to be deflected at a specified angle of emergence onto the light collecting surface (col 2, lines 49-55). Ross also discloses a relative thick phase hologram having a high efficiency (col 6, lines 59-61).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the hologram characteristics teaching of the Ross to the document teachings of Bohm in order to distribute light in an effective manner so that the image of the hologram is easily viewed by the naked eyes. Not only does such modification provides an

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easily viewable image to the document handler, but it also covers the bar code hidden in the under lying layers to prevent unauthorized users to utilize the bar code.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bohm as applied to claim 1 above, and further in view of Hoshino et al (US 5,621,515). The teachings of Bohm have been discussed above.

Bohm fails to teach hologram over plurality of separate regions.

Hoshino teaches a card with hologram O over plurality of separate regions (Fig. 5).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Hoshino to the teachings of Bohm such that the holograms are spread out throughout the document for increased security and unique identification of the card.

7. Claims 5-10 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohm in view of Sassmannshausen et al (US 5,104,768). The teachings of Bohm have been discussed above.

Bohm fails to teach a photopolymer, a photocrosslinkable polymer and an organic semiconductor.

Sassmannshausen teaches photostructurable organic polymer used in semiconductor components and a photocrosslinkable polymer (col 1, lines 10-16 and col 2, lines 38-45).

Sassmannshausen further teaches a photoresist material having a layer thickness of 0.1 to 500um (col 6, lines 30-40).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Sassmannshausen to the teachings of Bohm

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in order to distribute light in an effective manner so that the image of the hologram is easily viewed by the naked eyes. Not only does such modification provides an easily viewable image to the document handler, but it also covers the bar code hidden in the under lying layers to prevent unauthorized users to utilize the bar code.

8. Claims 11, 12, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohm in view of Sassmannshausen as applied to claim 5 above, and further in view of Saji et al (US 5,030,325). The teachings of Bohm as modified by Sassmannshausen have been discussed above.

Bohm as modified by Sassmannshausen fails to teach that establishing document includes forming the document from a base stock having the variable refractive index material contained therein as an organic pigment and the organic pigment has a concentration of 1 to 5 by volume in the back stock.

Saji teaches method for manufacturing gloss paper wherein the proportion of the organic pigment is 5 wt% (col 2, lines 60-65).

Therefore, it would have been obvious to an artisan of ordinary skill in the art the time the invention was made to integrate the teachings of Saji to the teachings of Bohm as modified by Sassmannshausen in order to provide a smooth and visually glossy paper for easily applying layers on the paper as well as easy handling by the user.

9. Claims 13, 14, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohm in view of Sassmannshausen as applied to claim 5 above, and further in view of Tanaka et al (US 5,587,405). The teachings of Bohm as modified by Sassmannshausen have been discussed above.

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Bohm as modified by Sassmannshausen fail to teach that the establishing the document includes formation of incidia from a printing ink containing the variable refractive index material therein as an organic pigment and the organic pigment has a concentration of 1 to 5 by volume.

Tanaka discloses an ink composition wherein the application amount of the pigments falls in the range of 0.5 to 50 wt% per total ink composition volume, which includes 1 to 5 (col 15, lines 20-25).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Tanaka as modified by Bohm as modified by Sassmannshausen in order to distinctively show the differences between the bars and the spaces of the bar code, such that the bar code can easily be read by a scanner. Such modification provides accurate reading of the codes as well as retrieving correct data related to the bar code.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schell et al., U.S. Patent No. 4,971,646, discloses a method for forming a hologram flim laminate and the hologram laminated product formed thereby.

Valadier et al., U.S. Patent No. 5,754,675, discloses identify checking system having card-bearer biometrical features-stored in codified form.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kumiko C. Koyama whose telephone number is 571-272-2394. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kumiko C. Koyama  
August 06, 2004



**DIANE I. LEE**  
**PRIMARY EXAMINER**